

## Abstract of the Disclosure

The present invention is directed to the synthesis of molecules guided by connector polynucleotides (CPNs capable of hybridizing to complementary connector polynucleotides (CCPNs) harbouring at least one functional entity comprising at least one reactive group. At least one of said CCPNs capable of hybridize to at least two CPNs. Each CPN will "call" for one or more CCPNs capable of hybridization to the CPN. Following the formation of a supramolecular hybridization complex comprising a plurality of CPNs and a plurality of CCPNs, the reaction of functional entity reactive groups result in the formation of a molecule comprising covalently linked functional entities. The formation of the molecule involves the transfer of functional entities from one or more "donor CCPNs" to at least one "acceptor CCPN" with which the transferred functional entities were not associated prior to the transfer.